UNIT TERMINAL OBJECTIVE

4-4 At the completion of this unit, the EMT-Intermediate student will be able to utilize the assessment findings to formulate a field impression and implement a treatment plan for a patient with a thoracic, **head, spinal or abdominal** injury.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Intermediate student will be able to:

4-4.2 Discuss the anatomy and physiology of the organs and structures related to thoracic injuries. (C-1)
4-4.3 Predict thoracic injuries based on mechanism of injury. (C-2)
4-4.4 Discuss the types of thoracic injuries. (C-1)
4-4.6 Discuss the assessment findings associated with thoracic injuries. (C-1)
4-4.7 Discuss the management of thoracic injuries. (C-1)
4-4.8 Identify the need for rapid intervention and transport of the patient with thoracic injuries. (C-1)
4-4.9 Discuss the epidemiology and pathophysiology of specific chest wall injuries, including: (C-1)
- a. Rib fracture
- b. Flail segment
- c. Sternal fracture

4-4.10 Discuss the assessment findings associated with chest wall injuries. (C-1)
4-4.11 Identify the need for rapid intervention and transport of the patient with chest wall injuries. (C-1)
4-4.12 Discuss the management of chest wall injuries. (C-1)
4-4.13 Discuss the pathophysiology of injury to the lung, including: (C-1)
- a. Simple pneumothorax
- b. Open pneumothorax
- c. Tension pneumothorax
- d. Hemothorax
- e. Hemopneumothorax
- f. Pulmonary contusion

4-4.14 Discuss the assessment findings associated with lung injuries. (C-1)
4-4.15 Discuss the management of lung injuries. (C-1)
4-4.16 Identify the need for rapid intervention and transport of the patient with lung injuries. (C-1)
4-4.17 Discuss the pathophysiology of myocardial injuries, including: (C-1)
- a. Pericardial tamponade
- b. Myocardial contusion

4-4.18 Discuss the assessment findings associated with myocardial injuries. (C-1)
4-4.19 Discuss the management of myocardial injuries. (C-1)
4-4.20 Identify the need for rapid intervention and transport of the patient with myocardial injuries. (C-1)
4-4.21 Discuss the pathophysiology of vascular injuries, including injuries to: (C-1)
- a. Aorta dissection/rupture
- b. Vena cava
- c. Pulmonary arteries/ veins

4-4.22 Discuss the assessment findings associated with vascular injuries. (C-1)
4-4.23 Discuss the management of vascular injuries. (C-1)
4-4.24 Discuss the pathophysiology of diaphragmatic injuries. (C-1)
4-4.25 Discuss the assessment findings associated with diaphragmatic injuries. (C-1)
4-4.26 Discuss the management of diaphragmatic injuries. (C-1)
4-4.27 Discuss the pathophysiology of esophageal injuries. (C-1)

4-4.28 Discuss the assessment findings associated with esophageal injuries. (C-1)
4-4.29 Discuss the management of esophageal injuries. (C-1)
4-4.30 Discuss the pathophysiology of tracheo-bronchial injuries. (C-1)
4-4.31 Discuss the assessment findings associated with tracheo-bronchial injuries. (C-1)
4-4.32 Discuss the management of tracheo-bronchial injuries. (C-1)
4-4.33 Discuss the pathophysiology of traumatic asphyxia. (C-1)
4-4.34 Discuss the assessment findings associated with traumatic asphyxia. (C-1)
4-4.35 Discuss the management of traumatic asphyxia. (C-1)
4-4.36 Differentiate between thoracic injuries based on the assessment and history. (C-3)
4-4.37 Formulate a field impression based on the assessment findings. (C-3)
4-4.38 Develop a patient management plan based on the field impression. (C-3)
4-4.39 Describe the incidence, morbidity, and mortality of head injury. (C-1)
4-4.40 Explain anatomy and relate physiology of the CNS to head injury. (C-1)
4-4.41 Predict head injuries based on mechanism of injury. (C-2)
4-4-42 Distinguish between head injury and brain injury. (C-3)
4-4.43 Explain the pathophysiology of head/brain injury. (C-1)
4-4.44 Explain the concept of increasing intracranial pressure (ICP). (C-1)
4-4.45 Explain the effect of increased and decreased carbon dioxide on ICP. (C-1)
4-4.46 Relate assessment findings associated with head/brain injuries. (C-1)
4-4.47 Identify the need for rapid intervention and transport of the patient with a head/brain injury. (C-1)
4-4.48 Describe and explain the general management of head/brain injury patient. (C-1)
4-4.49 Describe the incidence, morbidity, and mortality of spinal injuries in the trauma patient. (C-1)
4-4.50 Describe the anatomy and physiology of structures related to spinal injuries. (C-1)
- **a. Cervical**
- **b. Thoracic**
- **c. Lumbar**
- **d. Sacrum**
- **e. Coccyx**
- **f. Head**
- **g. Brain**
- **h. Spinal cord**
- **i. Nerve tract(s)**
- **j. Dermatomes**

4-4.51 Predict spinal injuries based on mechanism of injury. (C-2)
4-4.52 Describe the pathophysiology of spinal injuries. (C-1)
4-4.53 Explain traumatic and non-traumatic spinal injuries. (C-1)
4-4.54 Describe the assessment findings associated with spinal injuries. (C-1)
4-4.55 Describe the management of spinal injuries. (C-1)
4-4.56 Identify the need for rapid intervention and transport of the patient with spinal injuries. (C-1)
4-4.57 Describe the pathophysiology of traumatic spinal injury related to: (C-1)
- **a. Spinal shock**
- **b. Spinal neurogenic shock**
- **c. Quadriplegia/ paraplegia**
- **d. Incomplete cord injury/ cord syndromes:**

1. **Central cord syndrome**
2. **Anterior cord syndrome**
3. **Brown-Sequard syndrome**

4-4.58 Describe the management of traumatic spinal injuries. (C-1)

4-4.59 Describe the management of non-traumatic spinal injuries. (C-1)
4-4.60 Describe the epidemiology, including the morbidity/mortality and prevention strategies for a patient with abdominal trauma. (C-1)
4-4.61 Describe the anatomy and physiology of organs and structures related to abdominal injuries. (C-1)
4-4.62 Predict abdominal injuries based on blunt and penetrating mechanisms of injury. (C-2)
4-4.63 Describe open and closed abdominal injuries. (C-1)
4-4.64 Explain the pathophysiology of abdominal injuries. (C-1)
4-4.65 Describe the assessment findings associated with abdominal injuries. (C-1)
4-4.66 Identify the need for rapid intervention and transport of the patient with abdominal injuries based on assessment findings. (C-1)
4-4.67 Describe the management of abdominal injuries. (C-1)

AFFECTIVE OBJECTIVES
At the completion of this unit, the EMT-Intermediate student will be able to:

4-4.71 Advocate the use of a thorough assessment to determine a differential diagnosis and treatment plan for thoracic trauma. (A-3)
4-4.72 Advocate the use of a thorough scene survey to determine the forces involved in thoracic trauma. (A-3)
4-4.73 Value the implications of failing to properly diagnose thoracic trauma. (A-2)
4-4.74 Value the implications of failing to initiate timely interventions to patients with thoracic trauma. (A-2)
4-4.75 Advocate the use of a thorough assessment when determining the proper management modality for spine injuries. (A-3)
4-4.76 Value the implications of failing to properly immobilize a spine injured patient.
4-4.77 Advocate the use of a thorough assessment to determine a differential diagnosis and treatment plan for abdominal trauma. (A-3)
4-4.78 Advocate the use of a thorough scene survey to determine the forces involved in abdominal trauma. (A-3)
4-4.79 Value the implications of failing to properly diagnose abdominal trauma and initiate timely interventions to patients with abdominal trauma.

PSYCHOMOTOR OBJECTIVES
At the completion of this unit, the EMT-Intermediate student will be able to:

4-4.80 Demonstrate a clinical assessment for a patient with suspected thoracic trauma. (P-1)
4-4.81 Demonstrate the following techniques of management for thoracic injuries: (P-1)
a. Needle decompression
b. Fracture stabilization
c. ECG monitoring

d. Oxygenation and ventilation

4-4.82 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected traumatic spinal injury. (P-1)

4-4.83 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected non-traumatic spinal injury. (P-1)

4-4.84 Demonstrate immobilization of the urgent and non-urgent patient with assessment findings of spinal injury from the following presentations: (P-1)

- **a. Supine**
- **b. Prone**
- **c. Semi-prone**
- **d. Sitting**
- **e. Standing**

4-4.85 Demonstrate documentation of suspected spinal cord injury to include: (P-1)

- **a. General area of spinal cord involved**
- **b Sensation**
- **c. Dermatomes**
- **d. Motor function**
- **e. Area(s) of weakness**

4-4.86 Demonstrate preferred methods for stabilization of a helmet from a potentially spine injured patient. (P-1)

4-4.87 Demonstrate helmet removal techniques. (P-1)

4-4.88 Demonstrate alternative methods for stabilization of a helmet from a potentially spine injured patient. (P-1)

4-4.89 Demonstrate documentation of assessment before spinal immobilization. (P-1)

4-4.91 Demonstrate documentation of assessment during spinal immobilization. (P-1)

4-4.92 Demonstrate a clinical assessment to determine the proper treatment plan for a patient with suspected abdominal trauma. (P-1)

4-4.93 Demonstrate the proper use of MAST (PASG) in a patient with suspected abdominal trauma. (P-1)

4-4.94 Demonstrate the proper use of MAST (PASG) in a patient with suspected pelvic fracture. (P-1)